

Please enter the following claims.

54. (New) A method of detecting at least one hybridization complex comprising a target nucleic acid, said method comprising:

a) adding a target nucleic acid to an array to form at least a first hybridization complex, said array comprising a solid support having a plurality of regions, each region comprising an electrode and a self-assembled mixed monolayer comprising

i) blocking moieties, having a first end attached to said electrode, wherein said blocking moieties shield nucleic acids from said electrode; and

ii) at least one modified nucleic acid comprising a nucleic acid and a linker moiety having a first and second end;

wherein said first end of said linker is attached to said electrode and said second end is attached to said nucleic acid;

wherein at east two different regions comprise different probe nucleic acids;

b) adding an agent that distinguishes between single and double stranded nucleic acids; and

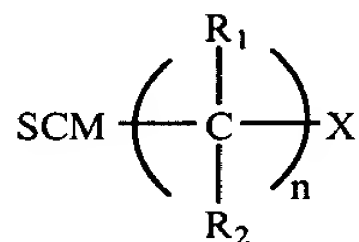
c) detecting the presence of said first hybridization complex.

52. (New) A method according to claim ⁵¹~~54~~, wherein said first end of said blocking moieties is attached to said electrode via a sulfur linkage.

53. (New) A method according to claim ⁵²~~55~~, wherein said first end of said linker is attached to said electrode via a sulfur linkage.

54. (New) A method according to claim ^{51 52 53}~~54, 55, or 56~~, wherein said electrode comprises gold.

55. (New) A method according to claim ⁵¹~~54~~, wherein said blocking moieties have the formula:



wherein

SCM is a sulfur-containing moiety, wherein said sulfur containing moiety is attached to said electrode;

R_1 and R_2 are independently selected from the group consisting of hydrogen and substituent groups;
 n is an integer from 3 to 50; and
 X is a terminal group.

56 (New) A method according to claim ⁵⁵~~58~~, wherein R_1 and R_2 are hydrogen.

57. (New) A method according to claim ⁵⁶~~59~~, wherein said blocking moieties comprise alkyl.

58 (New) A method according to claim ^{55 56 57}~~58, 59, or 60~~, wherein n is ≥ 6 .

59. (New) A method according to claim ⁵¹~~54~~, wherein said blocking moiety is a branched molecule.

60 (New) A method according to claim ⁵⁹~~62~~, wherein said blocking moiety is a straight chain alkyl group.

61. (New) A method according to claim ⁶⁰~~63~~, wherein said alkyl ranges from 1 to 20 carbon atoms.

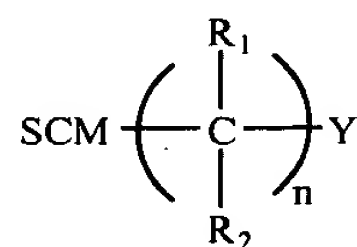
62. (New) An method according to claim ⁵¹~~54~~, wherein said array comprises a plurality of different blocking moieties.

63 63. (New) A method according to claim ⁶²~~65~~, wherein at least one of said blocking moieties is a branched molecule.

64 64. (New) A method according to claim ^{62 63}~~65 or 66~~, wherein at least one of said blocking moieties is an alkyl group.

65 (New) An method according to claim ⁵⁵~~58~~, wherein for said blocking moiety,..
SCM is a thiol containing moiety;
 R_1 and R_2 are hydrogen;
 n is 16; and
 X is hydroxyl.

66 (New) A method according to claim 54, wherein said linker moiety has the formula:



wherein

SCM is a sulfur-containing moiety, wherein said sulfur containing moiety is attached to said electrode;

R₁ and R₂ are independently selected from the group consisting of hydrogen and substituent groups;

n is an integer from 3 to 50; and

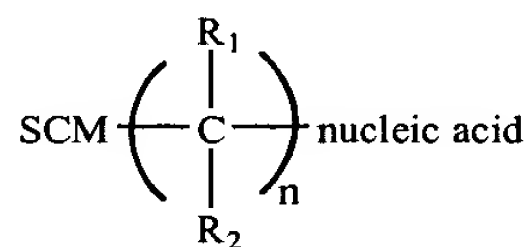
Y is the point of attachment for a nucleic acid.

67. (New) A method according to claim 66, wherein said linker moiety is a straight chain alkyl group.

68. (New) A method according to claim 67, wherein said alkyl group ranges from 1 to 20 carbon atoms.

69. (New) A method according to claim 66, wherein for said linker moiety,
SCM is a thiol containing moiety;
R₁ and R₂ are hydrogen;
n is 16; and
Y is oxygen.

70. (New) A method according to claim 54, wherein said modified nucleic acids have the formula:



wherein

SCM is a sulfur-containing moiety, wherein said sulfur containing moiety is attached to said electrode;

R₁ and R₂ are independently selected from the group consisting of hydrogen

and substituent groups; and
n is an integer from 3 to 50.

71. (New) A method according to claim 70, wherein R_1 and R_2 are hydrogen.

72. (New) A method according to claim ~~66~~, 70, or 71, wherein n is ≥ 6 .

73. (New) A method according to claim 70, wherein for said linker moiety,
SCM is a thiol containing moiety;
 R_1 and R_2 are hydrogen;
n is 16; and
Y is oxygen.

74. (New) A method according to claim 54, wherein said blocking moiety comprises a phosphorus-containing moiety.

75. (New) A method according to claim 54, wherein said nucleic acid is attached to said linker at a 2' position of a ribose.

76. (New) A method according to claim 54, wherein said nucleic acid is attached to said linker at a 3' position of a ribose.

77. (New) A method according to claim 54, wherein said nucleic acid is attached to said linker at a base of said nucleic acid.

78. (New) A method according to claim 54, wherein said nucleic acid is attached to said linker at a phosphate linkage of said nucleic acid.

79. (New) A method according to claim 54, wherein said agent is an intercalating agent.

REMARKS

Claims 15-50 have been cancelled by amendment. Claims 51-82 have been added. Support is found throughout the specification, for example on page 25, lines 20-25. No new matter is entered by way of these added claims, and therefore entry of the claims into the instant application is respectfully requested.